COUNTY OF LEXINGTON, SOUTH CAROLINA

Public Works Stormwater Division

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VEGETATION SPECIFICATIONS

Part 1: Temporary and Permanent Vegetation
Part 2: Reestablishing Buffers

Part 1: Temporary and Permanent Vegetation (grasses)

Temporary Vegetation

Plant Selection

Plant seed selection should be based on the type of soil and the season of the year in which the planting is to be done. Tables 1 and 2 should be used if you plan to use conventional tillage methods (plowing, seedbed preparation, hydroseeding, etc). If you need a fast growing crop to nurse your permanent species, then use the mix rate. Failure to carefully follow agronomic recommendations often result in an inadequate stand of temporary vegetation that provides little or no erosion control.

Tillage

If the area has been recently plowed, no tillage is required other than raking or surface roughening to break any crust that has formed and to leave a textured surface. If the soil is compacted less than 6-inches, it should be disked for optimal germination.

Soil Testing

Information and test provider is available from the Soil and Water Conservation District Office.

Lime

Lime is not required for temporary seeding unless a soil test shows that the soil pH is below 5.0. It may be desirable to apply lime during the temporary seeding operation to benefit the long-term permanent seeding. Apply a minimum of 1.5 tons of Lime/acre (70 pounds per 1000 square feet) if it is to be used.

Fertilizer

A minimum of 500 pounds per acre of 10-10-10 fertilizer (11.5 pounds per 1000 square feet) or equivalent should be applied during temporary seeding unless a soil test indicates a different 90 requirement. Fertilizer and lime (if used) should be incorporated into the top 4-6 inches of the soil by disking or other means where conditions allow.

Seeding

The surface of the soil should be loosened just before broadcasting the seed. Seed should be applied evenly by the most convenient method available for the type of seed to be used and the location of the temporary seeding. Typical application methods include but are not limited to cyclone seeders, rotary

spreaders, drop spreaders, broadcast spreaders, hand spreaders, cultipacker seeder, and hydro-seeders. Cover applied seed by raking or dragging a chain, and then lightly firm the area with a roller or cultipacker.

Mulching

Mulch should be used in all permanently seeded areas to retain soil moisture and reduce erosion during establishment of vegetation. The mulch should be applied evenly in such a manner that it provides a minimum of 75% coverage. Typical mulch applications include straw, wood fibers, compost much or hydro-mulches. The most commonly accepted mulch used in conjunction with temporary seeding is small grain straw. This straw should be dry and free from mold damage and noxious weeds. The straw may need to be anchored with netting or emulsions to prevent it from being blown or washed away. The straw mulch may be applied by hand or machine at the rate 1.5 - 2 tons per acre (90 pounds per 1000 square feet). Frequent inspections are necessary to check that conditions for growth are good.

Irrigation

Seeded areas should be kept adequately moist. Irrigate the seeded area if normal rainfall is not adequate for the germination and growth of seedlings. Water seeded areas at controlled rates that are less than the rate at which the soil can absorb water to prevent runoff. Runoff of irrigation water wastes water and can cause erosion.

Re-seeding

Areas where the plants do not grow quickly, thick enough, or adequately to prevent erosion should be re-seeded with temporary grasses as soon as such areas are identified.

Table 1. Temporary Vegetation Schedule

Species	Rates (lbs/acre)	Optimum Dates to Plant	Remarks
Browntop Millet (Alone)	40	April 20 – August 15	Quick, Dense Cover
Browntop Millet (Mix)*	10	April 20 – August 15	Quick, Dense Cover
Rye Grain (Alone)	56	February – March, August 15 – November 20	Quick Cover
Rye Grain (Mix)*	10	February – March, August 15 – November 20	Quick Cover
Rye Grass (Alone)	50	August 10 – October 10	Competitive, Dense
Rye Grass (Mix)*	8	August 10 – October 10	Competitive, Dense

* For details on mixes, consult the Lexington County Soil and Water Conservation District

Table 2. Temporary Vegetation for Steep Slopes/Cut Slopes

Species	Rates (lbs/acre)	Optimum Dates to Plant	Remarks
Weeping Lovegrass (Alone)	4	April – July 20	Quick cover, deep roots, likes dry sites, seldom used alone, clumps
Weeping Lovegrass (Mix)*	2	April – July 20	Quick cover, deep roots, likes dry sites, seldom used alone, clumps

* For details on mixes, consult the Lexington County Soil and Water Conservation District

Permanent Vegetation

Plant Selection

Plant seed selection should be based on the type of soil, the season of the year in which the planting is to be done, and the needs and desires of the permanent land user. Tables 3 and 4 should be used to select the desired species to be planted. Failure to carefully follow agronomic recommendations often result in an inadequate stand of permanent vegetation that provides little or no erosion control. The rates in Tables 3 and 4 are based on purity and germination standards required for certification.

The following notes apply to Tables 3 and 4:

1. In mixtures with temporary cover, the full seeding rate of permanent cover shall be used.
2. Mix means two (2) or more long term species plus short term species. For dates other than optimum, call Lexington Soil and Water Conservation District.
3. A legume, such as a clover, crown vetch, and serecia should be used where it is possible.
4. The appropriate inoculants should be used.

Topsoil

If the surface soil of the seedbed is not adequate for plant growth, topsoil should be applied.

Tillage

If the area has been recently plowed, no tillage is required other than raking or Surface Roughening to break any crust that has formed and to leave a textured surface. If the soil is compacted less than 6-inches, it should be disked for optimal germination. If the soil is compacted more than 6-inches, it should be sub-soiled and disked.

Soil Testing

Information and test provider is available from the Soil and Water Conservation District Office.

Lime

Unless a specific soil test indicates otherwise, apply 1½ tons of ground course textured agricultural limestone per acre (70 pounds per 1000 square feet).

Fertilizer

A minimum of 1000 pounds per acre of a complete 10-10-10 fertilizer (23 pounds per 1000 square feet) or equivalent should be applied during permanent seeding of grasses unless a soil test indicates a different requirement. Fertilizer and lime (if used) should be incorporated into the top 4-6 inches of the soil by disking or other means where conditions allow. Do not mix the lime and the fertilizer prior to the field application.

Seeding

The surface of the soil should be loosened just before broadcasting the seed. Seed should be evenly applied by the most convenient method available for the type of seed to be applied. Typical application methods include but are not limited to cyclone seeders, rotary spreaders, drop spreaders, broadcast spreaders, hand spreaders, cultipacker seeder, and hydro-seeders. Cover applied seed by raking or dragging a chain or brush mat, and then lightly firm the area with a roller or cultipacker. Do not roll seed that is applied with a hydro-seeder and hydro-mulch.

Mulching

All permanent seeded areas should be covered with mulch immediately upon completion of the seeding application to retain soil moisture and reduce erosion during establishment of vegetation. 93 The mulch should be applied evenly in such a manner that it provides a minimum of 75% coverage. Typical mulch applications include straw, wood fiber, and compost mulch. The most commonly accepted mulch used in conjunction with permanent seeding is small grain straw. This straw should be dry and free from mold damage and noxious weeds. The straw may need to be anchored with netting or asphalt emulsions to prevent it from being blown or washed away. The straw mulch may be applied by hand or machine at the rate 2 tons per acre (90 pounds per 1000 square feet). Frequent inspections are necessary to check that conditions for growth are good.

Irrigation

Permanent seeded areas should be kept adequately moist, especially late in the specific growing season. Irrigate the seeded area if normal rainfall is not adequate for the germination and growth of seedlings. Water seeded areas at controlled rates that are less than the rate at which the soil can absorb water to prevent runoff. Runoff of irrigation water wastes water and can cause erosion.

Re-seeding

Inspect permanently seeded areas for failure, make necessary repairs and re-seed or overseed within the same growing season if possible. If the grass cover is sparse or patchy, re-evaluate the choice of grass and quantities of lime and fertilizer applied. If the permanent seeding has less than 40% cover, have the soil tested to determine any acidity or nutrient deficiency problems.

Final stabilization by permanent seeding of the site requires that it be covered by a 70% coverage rate.

Post-Stabilization

Once areas are stabilized they can be converted to native species or for establishing on non-critical, level sites. Table 5 lists some native species of Lexington County that can be used.

Table 3. Permanent Vegetation Schedule

Species	Rates (lbs/acre)	Optimum Dates to Plant	Remarks
Bahia Grass (Alone)	40	March 20 – June 15	Slow to become established
Bahia Grass (Mix)*	30	March 20 – June 15	Slow to become established
Bermuda Grass (Hulled) (Alone)	8 – 12	April – July 15	Quick cover, sod forming, partial winter kill
Bermuda Grass (Hulled) (Mix)*	4 – 6	April – July 15	Quick cover, sod forming, partial winter kill
Fescue, Tall (KY31) Alone	40	August 15 – October	Seldom seeded alone, not for dry or wet sites
Fescue, Tall (KY31) Mix*	20	August 15 – October	Seldom seeded alone, not for dry or wet sites
Sericea Lespedeza (Scarified) Alone or Mix*, (Inoculate with EL Inoculant)	40	April – June	Good for slopes, cuts, and fills that require low maintenance
Ladino Clover (Mix* only), (Inoculate with AB inoculant)	2	August 20 – October	Naturally adds nitrogen

* For details on mixes, consult the Lexington County Soil and Water Conservation District

Table 4. Permanent Vegetation Schedule for Steep Slopes/Cut Slopes

Species	Rates (lbs/acre)	Optimum Dates to Plant	Remarks
Weeping Lovegrass (Alone)	4	April – July 20	Quick cover, deep roots, likes dry sites, seldom used alone, clumps
Weeping Lovegrass (Mix)*	2	April – July 20	Quick cover, deep roots, likes dry sites, seldom used alone, clumps
Crownvetch (Mix)*	8 – 10	March – April	2 years to establish, no mowing, green all year, 20" maximum height

* For details on mixes, consult the Lexington County Soil and Water Conservation District

Table 5. Native Species That Can Be Used on Non-Critical, Level Sites in Lexington County, SC

Species	Rates (lbs/acre)	Optimum Dates to Plant	Remarks
Switchgrass (Mix* with Legumes)	10, PLS**	February 10 – April 20	Mix with Serecia at 30 lbs/acre
Indian Grass (Mix)*	8, PLS**	February 10 – April 20	Mix with Serecia at 30 lbs/acre
Little Bluestem, (Mix)*	8, PLS**	February 10 – April	-

* For details on mixes, consult the Lexington County Soil and Water Conservation District
** PLS - Pure Live Seed

Part 2 Re-establishing Buffers

Recommended Plant Species			
Trees		**Shrubs**	**Grass & Forbs**
American Elm	Sugarberry	Buttonbush	Miadencane
American Holly	Swamp Chestnut Oak	Silky Dogwood	Switchgrass (Alamo)
Baldcypress	Swamp Tupelo	Swamp Azalea	Bushy Bluestem
Bigleaf Magnolia	Sweetgum	Wax Myrtle	Switchcane
Bitternut Hickory	Black Willow	Alder	Hibiscus
Boxelder	Cottonwood	American Stawberry Bush	Water Willow
Chastetree	Cypress, Pond	American Beautyberry	Big Bluestem
Cherrybark Oak	River Birch	American Holly	Broomsedge
Chinese Parasoltree	Swamp Tupelo	Carolina Rose	Eastern Gamagrass
Common Persimmon	Willow Oak	Native Azaleas	Little Bluestem
Deciduous Holly	Water Oak		Indiangrass
Green Ash	Crabapple		Purpletop
Laurel Oak	Dogwood		Switchgrass
Loblolly Pine	Eastern Redbud		Illinois Bundleflower
Oriental Arborvitae	Eastern Redcedar		Partridge Pea
Overcup Oak1	Hackberry		Purple Coneflower
Overcup Oak2	Red Maple		
Pawpaw	Red Mulberry		
Pin Oak	Sycamore		
Red Maple1	White Ash		
Red Maple2	Yellow Poplar		
Sawtooth Oak	Turkey Oak		
Shumard Oak	Water Elm		
Silver Maple	Water Hickory		
Southern Magnolia	Water Tupelo		